Brown AND Caldwell

2 North Central Avenue, Suite 1600
Phoenix, Arizona 85004

T: (602) 567-4000
F: (602) 567-4001

Memorandum

Prepared for: File
Project Title: Florence Copper
Project No.: 149050

Subject: Florence Copper Project, Temporary APP and UIC Permits, Ambient Events 9 and MW-01s 6 and 7
Date: May 18, 2018
To: Ian Ream
From: Barb Sylvester

Groundwater sampling at the Florence Copper Project site took place March 5 through February 8 and March 19, 2018. Twelve (12) Point-of-Compliance (POC) and Supplemental wells were sampled as part of the ambient monitoring program for the Temporary APP and UIC permits. Wells MW-01-LBF and MW-01-O were sampled twice during the month, fourteen days apart. Fifteen total samples were collected, including one duplicate sample. The electric pump in M61-LBF was replaced with a low-flow bladder pump immediately prior to sampling. Table 1 summarizes the sampling activities.

Ambient samples were to be analyzed for metals, inorganics, organics, and radionuclides (Table 2). Samples for metal analysis were filtered in the field.

Table 1. Summary of March 2018 Ambient Event

Date	Sample Identification	Pump Style	Analyses
March 5, 2018	M54-LBF	Low-Flow	Level II
March 6, 2018	M54-O	Low-Flow	Level II
	M57-O	Low-Flow	Level II
	M58-O	Low-Flow	Level II
March 7, 2018	M52-UBF	Low-Flow	Level II
	M55-UBF	Low-Flow	Level II
	M56-LBF	Low-Flow	Level II
	M59-O	Low-Flow	Level II
March 8, 2018	M60-O	Low-Flow	Level II

Table 1. Summary of March 2018 Ambient Event			
Date	Sample Identification	Pump Style	Analyses
March 8, 2018	M61-LFB	Low-Flow	Level II
	MW-01-LBF	Low-Flow	Level II
	MW-01-O	Low-Flow	Level II
March 22, 2018	MW-01-LBF M63.0 (Duplicate)	Low-Flow	Level II
	MW-01-O	Low-Flow	Level II

Table 2. Analytical Parameters		
Analysis	Method	Preservative
Inorganic Common Ions		
pH (lab)	SM 4500H+	None
Electroconductivity (EC) (lab)	SM 2510B	None
Bicarbonate Alkalinity	SM 2320B	None
Carbonate Alkalinity	SM 2320B	None
Hydroxide Alkalinity	SM 2320B	None
Total Alkalinity	SM 2320B	None
Chloride	EPA 300.0	None
Fluoride (Level I)	EPA 300.0	None
Nitrate as N	EPA 300.0	None
Nitrite as N	EPA 300.0	None
Sulfate (Level I)	EPA 300.0	None
Total Dissolved Solids (Level I)	SM 2540C	None
Cation/Anion Balance	Calculation	-
Cyanide	EPA 335.4	NaOH
Formation-Related Radiochemicals		
Gross Alpha	600/00-02	None
Gross Beta	900.0	None
Radium 226	903/GammaRay HPGE	None
Radium 228	904/GammaRay HPGE	None
Total Uranium Isotopes (if G. Alpha >12.0)	ASTM 6239	None
Radon 222	7500-Rn	None (Voas)
Total Uranium (unfiltered total as mg/L)	EPA 200.8	HNO3
Process-Related Organics		
Extractable Fuel Hydrocarbons (Diesel Range Organics)	EPA 8015D	None

Table 2. Analytical Parameters		
Analysis	Method	Preservative
Benzene	EPA 8260B	HCl Voas
Ethylbenzene	EPA 8260B	HCl Voas
Toluene	EPA 8260B	HCl Voas
Total Xylene	EPA 8260B	HCl Voas
Carbon Disulfide	EPA 8260B	HCl Voas
Napthalene	EPA 8260B	HCl Voas
Octane	EPA 8260B	HCl Voas
Trace Metals and Cations (Filtered-Dissolved)		
Aluminum	EPA 200.8	HNO3
Antimony	EPA 200.8	HNO3
Arsenic	EPA 200.8	HNO3
Barium	EPA 200.8	HNO3
Beryllium	EPA 200.8	HNO3
Calcium	EPA 200.7	HNO3
Cadmium	EPA 200.8	HNO3
Chromium	EPA 200.8	HNO3
Cobalt	EPA 200.8	HNO3
Copper	EPA 200.8	HNO3
Iron	EPA 200.7	HNO3
Lead	EPA 200.8	HNO3
Magnesium (Level I)	EPA 200.7	HNO3
Manganese	EPA 200.8	HNO3
Mercury	EPA 245.1	HNO3
Nickel	EPA 200.8	HNO3
Potassium	EPA 200.7	HNO3
Selenium	EPA 200.8	HNO3
Sodium	EPA 200.7	HNO3
Thallium	EPA 200.8	HNO3
Zinc	EPA 200.8	HNO3

Observations/Problems

1. Wells MW-01-LBF and MW-01-O were sampled twice during the month, fourteen days apart.
2. The electric pump in M61-LBF was replaced with a low-flow bladder pump immediately prior to sampling. This may have contributed to higher turbidity results during sampling. It is not expected to have a significant impact on sample results.
3. Turbidity measurements above 5 NTUs were observed in M61-LFB and MW-01-LBF.

Table 3. Summary of Water Levels						
Sample Event:	Ambient Event 9, MW-01s 6&7				Measured By:	M. Orcutt
Well ID	Sample Date	Depth to Water (feet bls)	Description of Measuring Point	Elevation of Measuring Point (feet amsl)	Water Level Elevation (feet amsl)	Comments
M52-UBF	3/7/2018	228.79	TOC	1485.04	1256.25	
M54-LBF	3/5/2018	226.85	TOC	1481.89	1255.04	
M54-O	3/6/2018	222.93	TOC	1482.40	1259.47	
M55-UBF	3/7/2018	223.88	TOC	1479.21	1255.33	
M56-LBF	3/7/2018	223.54	TOC	1478.69	1255.15	
M57-O	3/6/2018	219.15	TOC	1478.75	1259.60	
M58-O	3/6/2018	221.88	TOC	1481.16	1259.28	
M59-O	3/7/2018	222.45	TOC	1480.26	1257.81	
M60-O	3/8/2018	220.10	TOC	1477.45	1257.35	
M61-LBF	3/8/2018	224.40	TOC	1480.80	1256.40	
MW-01-LBF	3/8/2018	223.76	TOC	NM	NA	
MW-01-LBF	3/22/2018	229.32	TOC	NM	NA	
MW-01-O	3/8/2018	221.45	TOC	NM	NA	
MW-01-O	3/22/2018	230.05	TOC	NM	NA	

amsl = Above Mean Sea Level

TOC = Top of Casing

TOM = Top of Monument

NM = Not Measured

Table 4. Summary of Field Parameters						
Sample Event:	Ambient Event 9, MW-01s 6&7		Measured By:	M. Orcutt		
Well ID	Sample Date	Temperature (°C)	pH	Conductivity (µmhos/cm)	Turbidity (NTU)	Comments
M52-UBF	3/7/2018	22.2	7.38	1,420	0.41	
M54-LBF	3/5/2018	22.3	7.16	1,488	0.42	
M54-O	3/6/2018	21.4	7.97	764	0.28	
M55-UBF	3/7/2018	21.6	7.10	1,479	2.08	
M56-LBF	3/7/2018	21.8	7.18	1,407	3.37	
M57-O	3/6/2018	22.5	7.90	861	4.12	
M58-O	3/6/2018	22.1	7.42	1,498	4.28	
M59-O	3/7/2018	22.1	7.72	913	0.49	
M60-O	3/8/2018	21.3	7.97	882	1.25	
M61-LBF	3/8/2018	23.3	8.09	749	6.55	
MW-01-LBF	3/8/2018	22.8	7.41	1,469	9.18	
MW-01-LBF	3/22/2018	23.4	7.57	1,490	2.73	
MW-01-O	3/8/2018	22.6	7.72	1,351	1.60	
MW-01-O	3/22/2018	23.4	7.75	1,433	0.70	

°C = degrees Celsius

°F = degrees Fahrenheit

µmhos/cm = Micromhos per Centimeter

NTU = Nephlometric Tubidity Units

SITE VISITATION

JOB NAME: Florence Copper JOB NUMBER: 150342 ~~002~~ 201 ~~203~~

PERSONNEL: M. Orcutt DATE: 3-5-2018

COMMENTS:

0750 On site, picked up sample bottles and QED equipment,
Second case of QED filters brought to site,
M3, M4 remaining for QED wells
M16, M20, and ~~M22~~ remaining electric wells,
0930 (Mob for Bottles) M22
Mob to wells to warm up equipment for calibrations.
1042 Sampled M3-GL
1127 Sampled M4-O
Short lunch and return to Ambient

1132 M16-GU(R) Started by Ian

1300 Sampled Ambient POC MS4-UBF
1407 Sampled M16-GU(R),

1425 Mob back to office and drop off QED and turn over samples to Ian,
Airgas on site. Left samples for Ian
3 drop, 4 pickup, 1 in truck,

1505 off site

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SITE VISITATION

JOB NAME: Florence Copper JOB NUMBER: 150342

PERSONNEL: M. Orcutt DATE: 3-6-2018

COMMENTS:

0750 On site, Picked up QED and Ambient cooler,
Mob to wells to warm up BC's WQ meters for APP calibrations,
Calibrated meters while first well pumps.

0918 Sampled MS4-O
1000 Mob to grab Nitrogen and Return.
1117 Sampled MS8-O
1200 Short lunch and return to Amb. wells.

1345 Sampled MS7-O
1430 ~~Separated~~ Pulled Radon samples from cooler and placed & into smaller cooler w/ice for Rad Safety Labs,
Mob back to return QED and hand Turner Samples to Dan,
1455 BFC Site

End
3/6/18

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SITE VISITATION

JOB NAME: Florence Copper JOB NUMBER: _____

PERSONNEL: M. Orcutt DATE: 3/7/2018

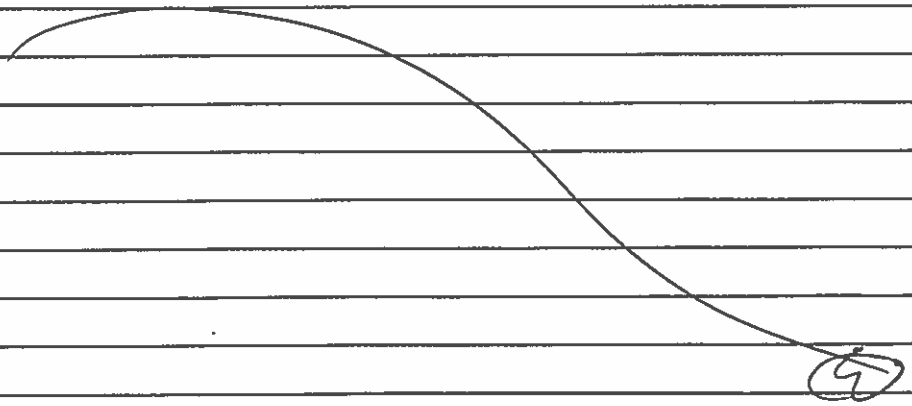
COMMENTS:

0720 On site. Picked up QED equipment and Mob to pumping well M22-0
Started 3/6 @ 1625 hrs.
Calibrated BC's WQ Meters

0815 Sampled ~~M20-0~~ M22-0
0856 Sampled M55-UBF
1000 Sampled M56-UBF
1040 Mob to D/C more bottles and short lunch.
Ivan to move generator to M20-0 for last pump

1218 Sampled M59-0
Unable to get to M52 from the West.
No pump in M61
1330 Sampled M20-0(R)

1412 Sampled M52-UBF
Samples to Ivan
1530 off site



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SITE VISITATION

JOB NAME: Florence Copper JOB NUMBER: .301

PERSONNEL: M. Orcutt DATE: 3/8/2018

COMMENTS:

0720 On site, picked up QED and coolers for Ambient GW Sampling.
Spoke with Ian and Barb, I may need to help install QED into M61 this morning.
4 Ambients remaining, Dup may be done in 2 weeks with MW-01.
One more set of level II from Turner.
2 Sets remain in sample Room on site
Warmed up and Calibrated BC" WQ meters

0845 Sampled M60-0
1028 Sampled MW-01-0
QED being installed in M61 by Ian & Geo.
Stop by to help/check in.
Help to ~~decap~~ decon + deploy pump (lunch)
1310 Sampled MW-01-LBF
1430 Sampled M61-LBF
1515 Mob back
Samples to Ian.
1545 off site to Rad Safety

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SITE VISITATION

JOB NAME: Florence Copper JOB NUMBER: 150342.301

PERSONNEL: M. Orcutt DATE: 3-22-2018

COMMENTS:

0850 On site, spoke with Ian and loaded QED, coolers, and Nitrogen. Mob to MW-1 wells and warmed up BC's WQ meters for calibration. Micropurged wells and Sampled Level II

1027 Sampled MW-01-0
1150 Sampled MW-01-LBF w/ Dup MW3,0C 12:10.

1310 Short lunch and return. Unloaded QED & Nitrogen. Samples to Ian for Turner Rad Safety bottles to Lab by B.C.

1405 off site.

End 3/22/18

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: M52-UBF

SAMPLED BY: M. Orcutt

DATE: 3/7/18

WELL INFORMATION

TD Casing:	275	feet	Time Purge Start:	1352	hours
Static Depth to Water:	228.79	feet	Time Sample Start:	1412	hours
System Purge before Params	2.6	liters	Time Purged:	20	minutes

Time	Temperature (°C)	pH	EC (umhos/cm)	DO (mg/L)	Turbidity (NTU)	Pump Rate (L/min)	Purge Volume (L)	Pulldown DTW (feet)	Comments
	+/- 3%	+/- 0.1	+/- 3%	10% or <.5	10% or <5	<0.5L/min		<0.5 ft	QED Bladder Pump Intake 237.5'
1402	22.2	7.40	1420	5.84	0.30		3.0	0.00	Clear, no odors
1405	22.1	7.39	1422	6.10	0.59	0.33	4.0	0.00	
1408	22.1	7.38	1421	5.91	0.91	0.33	5.0	0.00	
1411	22.2	7.38	1420	5.90	0.41	0.33	6.0	0.00	
									Low flow for VOC?

Sample ID: M52-UBF Sample Time, 1412 Duplicate (ID = N14, Time N14) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: M54-LBF

SAMPLED BY: M. Orcutt

DATE: 3/5/18

WELL INFORMATION

TD Casing: 630 feet

Static Depth to Water: 226.85 feet

System Purge before Params 3.9 liters

Time Purge Start: 1233 hours

Time Sample Start: 1300 hours

Time Purged: 27 minutes

Time	Temperature (°C)	pH	EC (umhos/cm)	DO (mg/L)	Turbidity (NTU)	Pump Rate (L/min)	Purge Volume (L)	Pulldown DTW (feet)	Comments
	+/- 3%	+/- 0.1	+/- 3%	10% or <.5	10% or <5	<0.5L/min		<0.5 ft	QED Bladder Pump Intake 470'
1250	22.4	7.13	1496	5.30	2.24	0.23	4.0	0.02	clear, no odors
1253	22.3	7.15	1492	5.31	1.48	0.33	5.0	0.02	
1256	22.3	7.15	1490	5.41	0.50	0.33	6.0	0.02	
1259	22.3	7.16	1488	5.21	0.42	0.33	7.0	0.02	
									low flow for VOCs

Sample ID: M54-LBF Sample Time, 1300 Duplicate (ID = N/A, Time N/A) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: M54-O

SAMPLED BY: M. Orcutt

DATE: 3/6/18

WELL INFORMATION

TD Casing: 1,200 feet

Static Depth to Water: 222.93 feet

System Purge before Params 9.2 liters

Time Purge Start: 0824 hours

Time Sample Start: 0918 hours

Time Purged: 54 minutes

Time	Temperature (°C)	pH	EC (umhos/cm)	DO (mg/L)	Turbidity (NTU)	Pump Rate (L/min)	Purge Volume (L)	Pulldown DTW (feet)	Comments
	+/- 3%	+/- 0.1	+/- 3%	10% or <.5	10% or <5	<0.5L/min		<0.5 ft	QED Bladder Pump Intake 1000'
• 0900	18.9	7.35	932	1.20	0.54	0.26	9.5	0.02	Clear, No odors,
0905	21.3	7.78	777	0.62	0.41	0.20	10.5	0.03	
0909	21.3	7.90	770	0.40	0.20	0.25	11.5	0.04	
0913	21.3	7.95	766	0.32	0.16	0.25	12.5	0.04	
0917	21.4	7.97	764	0.27	0.28	0.25	13.5	0.04	• Held for D.O repair @ 9.5 liters
									Low flow for VOCs
									2,4,6,8

Sample ID: M54-O Sample Time, 0918 Duplicate (ID = N/A, Time N/A) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: M55-UBF

SAMPLED BY: M. Orcutt

DATE: 3/7/18

WELL INFORMATION

TD Casing:	260	feet	Time Purge Start:	0831 hours
Static Depth to Water:	223.88	feet	Time Sample Start:	0856 hours
System Purge before Params	2.8	liters	Time Purged:	25 minutes

Time	Temperature (°C)	pH	EC (umhos/cm)	DO (mg/L)	Turbidity (NTU)	Pump Rate (L/min) ⟷	Purge Volume (L)	Pulldown DTW (feet)	Comments
	+/- 3%	+/- 0.1	+/- 3%	10% or <.5	10% or <5	<0.5L/min		<0.5 ft	QED Bladder Pump Intake 250'
0842	21.5	7.12	1474	5.08	3.55	3.0	0.27	0.03	Clear, no odors
0846	21.5	7.11	1477	4.96	2.82	4.0	0.25	0.03	
0850	21.6	7.10	1479	5.50	2.48	5.0	0.25	0.03	
0854	21.6	7.10	1479	5.24	2.08	6.0	0.25	0.03	
									Low flow for VOC's

Sample ID: M55-UBF Sample Time, 0856 Duplicate (ID = N/A Time N/A) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: M56-LBF

SAMPLED BY: M. Orcutt

DATE: 3/7/18

WELL INFORMATION

TD Casing: 340 feet

Static Depth to Water: 223.54 feet

System Purge before Params 2.4 liters

Time Purge Start: 0941 hours

Time Sample Start: 10:00 hours

Time Purged: 19 minutes

Time	Temperature (°C) +/- 3%	pH +/- 0.1	EC (umhos/cm) +/- 3%	DO (mg/L) 10% or <.5	Turbidity (NTU) 10% or <5	Pump Rate (L/min) <0.5L/min	Purge Volume (L)	Pulldown DTW (feet) <0.5 ft	Comments QED Bladder Pump Intake 330'
0949	21.8	7.16	1386	5.80	5.30	0.37	3.0	0.25	Clear, no odors
0952	21.8	7.20	1404	4.66	4.39	0.33	4.0	0.25	
0955	21.8	7.19	1406	1.66	4.17	0.33	5.0	0.24	
0958	21.8	7.18	1407	1.73	3.37	0.33	6.0	0.23	
									Low flow for VOCs

Sample ID: M56-LFB Sample Time, 10:00 Duplicate (ID = N/A, Time N/A) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: M57-O

SAMPLED BY: M. Orcutt

DATE: 3/6/18

WELL INFORMATION

TD Casing: 1,200 feet

Static Depth to Water: 219.15 feet

System Purge before Params 8.7 liters

Time Purge Start: 13:06 hours

Time Sample Start: 1345 hours

Time Purged: 39 minutes

Time	Temperature (°C) +/- 3%	pH +/- 0.1	EC (umhos/cm) +/- 3%	DO (mg/L) 10% or <.5	Turbidity (NTU) 10% or <5	Pump Rate (L/min) <0.5L/min	Purge Volume (L)	Pulldown DTW (feet) <0.5 ft	Comments QED Bladder Pump Intake 950'
1333	22.7	7.81	854	1.24	5.77	0.33	9.0	0.05	Clear, NO ODORS
1337	22.6	7.84	859	1.24	5.34	0.25	10.0	0.06	
1340	22.6	7.87	859	1.14	4.76	0.33	11.0	0.06	
1343	22.5	7.90	861	1.09	4.12	0.33	12.0	0.06	
									Low flow for VOCs
									2,4,6,8

Sample ID: M57-O Sample Time, 1345 Duplicate (ID = N/A, Time N/A) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: M58-O

SAMPLED BY: M. Orcutt

DATE: 3/6/18

WELL INFORMATION

TD Casing: 1,200 feet

Static Depth to Water: 221.88 feet

System Purge before Params 8.7 liters

Time Purge Start: 10:40 hours

Time Sample Start: 11:17 hours

Time Purged: 37 minutes

Time	Temperature (°C) +/- 3%	pH +/- 0.1	EC (umhos/cm) +/- 3%	DO (mg/L) 10% or <.5	Turbidity (NTU) 10% or <5	Pump Rate (L/min) <0.5L/min	Purge Volume (L)	Pulldown DTW (feet) <0.5 ft	Comments QED Bladder Pump Intake 950'
1106	22.2	7.41	1503	0.89	8.53	0.34	9.0	0.00	Clear, NO ODORS
1109	22.2	7.38	1500	1.00	7.44	0.33	10.0	0.00	
11:12	22.1	7.42	1501	1.25	5.44	0.33	11.0	↓	
11:15	22.1	7.42	1498	1.30	4.28	0.33	12.0	↓	
									Low flow for VOC's
									2,4,6,8

Sample ID: M58-O Sample Time, 11:17 Duplicate (ID = N/A, Time N/A) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: M59-O

SAMPLED BY: M. Orcutt

DATE: 3/7/18

WELL INFORMATION

TD Casing:	1,200	feet	Time Purge Start:	1146	hours
Static Depth to Water:	222.45	feet	Time Sample Start:	1218	hours
System Purge before Params	8.7	liters	Time Purged:	32	minutes

Time	Temperature (°C)	pH	EC (umhos/cm)	DO (mg/L)	Turbidity (NTU)	Pump Rate (L/min)	Purge Volume (L)	Pulldown DTW (feet)	Comments
	+/- 3%	+/- 0.1	+/- 3%	10% or <.5	10% or <5	<0.5L/min		<0.5 ft	QED Bladder Pump Intake 950'
1209	22.1	7.73	988	0.72	0.88	0.39	9.0	0.00	clear, no odors
1212	22.2	7.71	997	0.71	0.54	0.33	10.0	0.00	
1214	22.2	7.71	907	0.60	0.62	0.50	11.0	0.00	
1216	22.1	7.72	913	0.51	0.49	0.50	12.0	0.00	
									Low flow for VOCs
									2,4,6,8

Sample ID: M59-O Sample Time, 1218 Duplicate (ID = N/A, Time N/A) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: M60-O

SAMPLED BY: M. Orcutt

DATE: 3/8/18

WELL INFORMATION

TD Casing:	1,200	feet	Time Purge Start:	0759	hours
Static Depth to Water:	220.10	feet	Time Sample Start:	0845	hours
System Purge before Params	8.7	liters	Time Purged:	47	minutes

Time	Temperature (°C)	pH	EC (umhos/cm)	DO (mg/L)	Turbidity (NTU)	Pump Rate (L/min)	Purge Volume (L)	Pulldown DTW (feet)	Comments
	+/- 3%	+/- 0.1	+/- 3%	10% or <.5	10% or <5	<0.5L/min		<0.5 ft	QED Bladder Pump Intake 950'
0833	20.9	7.92	908	1.37	2.31	0.25	9.0	~~0.45~~ 0.35	Clear, NO ODORS
~~0839~~ 0837	21.1	7.94	897	1.20	2.26	0.25	10.0	0.35	
0840	21.1	7.96	887	1.00	1.51	0.33	11.0	0.35	
0843	21.3	7.97	882	0.99	1.25	0.33	12.0	0.35	
									Switched out Nitrogen
									Low flow for VOC's
									2,4,6,8

Sample ID: M60-O Sample Time, 0845 Duplicate (ID = N/A, Time N/A) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: M61-LBF

SAMPLED BY: M. Orcutt

DATE : 3/8/18

WELL INFORMATION

TD Casing: 635 feet

Static Depth to Water: 224.40 feet

System Purge before Params 4.5 liters

Time Purge Start: 1356 hours

Time Sample Start: 1430 hours

Time Purged: 34 minutes

Time	Temperature (°C) +/- 3%	pH +/- 0.1	EC (umhos/cm) +/- 3%	DO (mg/L) 10% or <.5	Turbidity (NTU) 10% or <5	Pump Rate (L/min) <0.5L/min	Purge Volume (L)	Pulldown DTW (feet) <0.5 ft	Comments QED Bladder Pump Intake 535'
1416	23.3	8.20	745	6.56	7.50	0.25	5.0	0.70	Lt. cldy, no odors
1420	23.2	8.12	748	6.41	7.73	0.25	6.0	0.70	
1424	23.2	8.10	749	6.21	7.32	0.25	7.0	0.73	
1428	23.3	8.09	749	5.94	6.55	0.25	8.0	0.74	
									Reduced disch. Time @ 1416 hrs
									Low flow for VOC?
									QED installed c 1130 on 3/8/18
									2,

Sample ID: M61-LFB Sample Time, 1430 Duplicate (ID = N/A, Time N/A) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: MW-01-LBF

SAMPLED BY: M. Orcutt

DATE: 3/8/18

WELL INFORMATION

TD Casing: 630 feet

Static Depth to Water: 223.76 feet

System Purge before Params 5.0 liters

Time Purge Start: 1237 hours

Time Sample Start: 1310 hours

Time Purged: 33 minutes

Time	Temperature (°C) +/- 3%	pH +/- 0.1	EC (umhos/cm) +/- 3%	DO (mg/L) 10% or <.5	Turbidity (NTU) 10% or <5	Pump Rate (L/min) <0.5L/min	Purge Volume (L)	Pulldown DTW (feet) <0.5 ft	Comments QED Bladder Pump Intake 580'
1254	22.7	7.41	1470	2.86	13.8	0.29	5.0	0.05	Clear, no odors
1257	22.7	7.42	1476	3.00	11.8	0.33	6.0	0.05	
1300	22.7	7.42	1470	3.12	10.47	0.33	7.0	0.05	
1303	22.7	7.43	1469	3.10	9.50	0.33	8.0	0.05	
1306	22.8	7.42	1470	3.11	9.25	0.33	9.0	0.05	
1309	22.8	7.41	1469	3.01	9.18	0.33	10.0	0.05	
									Low flow for VOCs
									2.4

Sample ID: MW-01-LBF Sample Time, 1310 Duplicate (ID = N/A Time N/A) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: MW-01-LBF

SAMPLED BY: M. Orcutt

DATE: 3/22/18

WELL INFORMATION

TD Casing: 630 feet

Static Depth to Water: 229.32 feet

System Purge before Params 5.0 liters

Time Purge Start: 11:19 hours

Time Sample Start: 1150 hours

Time Purged: 31 minutes

Time	Temperature (°C) +/- 3%	pH +/- 0.1	EC (umhos/cm) +/- 3%	DO (mg/L) 10% or <.5	Turbidity (NTU) 10% or <5	Pump Rate (L/min) <0.5L/min	Purge Volume (L)	Pulldown DTW (feet) <0.5 ft	Comments QED Bladder Pump Intake 580'
11:36	23.4	7.61	1491	2.24	5.78	0.29	5.0	0.02	Clear, no odors
11:40	23.4	7.59	1490	2.54	5.45	0.25	6.0	0.02	
11:44	23.2	7.57	1491	1.19	3.70	0.25	7.0	0.02	
11:48	23.4	7.57	1490	1.08	2.23	0.25	8.0	0.02	
									Low flow for VOC's
									2,4

Sample ID: MW-01-LBF Sample Time, 11:50 Duplicate (ID = MW-03, Time 12:10) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: MW-01-O

SAMPLED BY: M. Orcutt

DATE: 3/8/18

WELL INFORMATION

TD Casing: 1,200 feet

Static Depth to Water: 221.45 feet

System Purge before Params 9.2 liters

Time Purge Start: 0944 hours

Time Sample Start: 1028 hours

Time Purged: 44 minutes

Time	Temperature (°C) +/- 3%	pH +/- 0.1	EC (umhos/cm) +/- 3%	DO (mg/L) 10% or <.5	Turbidity (NTU) 10% or <5	Pump Rate (L/min) <0.5L/min	Purge Volume (L)	Pulldown DTW (feet) <0.5 ft	Comments QED Bladder Pump Intake 1000'
1016	22.5	7.69	1378	3.00	4.52	0.29	9.5	0.25	Clear, no odors
1020	22.6	7.71	1363	2.73	2.16	0.25	10.5	0.27	
1023	22.6	7.75	1352	2.60	1.65	0.33	11.5	0.32	
1026	22.6	7.72	1351	2.51	1.60	0.33	12.5	0.32	
									Low flow for VOC's
									2, 4, 6, 8

Sample ID: MW-01-O Sample Time, 1028 Duplicate (ID = N/A, Time N/A) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

GROUNDWATER SAMPLING FIELD DATA

PROJECT: Florence Copper

WELL ID: MW-01-O

SAMPLED BY: M. Orcutt

DATE: 3/22/18

WELL INFORMATION

TD Casing: 1,200 feet

Static Depth to Water: 230.05 feet

System Purge before Params 9.2 liters

Time Purge Start: 0940 hours

Time Sample Start: 1027 hours

Time Purged: 47 minutes

Time	Temperature (°C) +/- 3%	pH +/- 0.1	EC (umhos/cm) +/- 3%	DO (mg/L) 10% or <.5	Turbidity (NTU) 10% or <5	Pump Rate (L/min) <0.5L/min	Purge Volume (L)	Pulldown DTW (feet) <0.5 ft	Comments QED Bladder Pump Intake 1000'
1013	23.0	7.66	1405	0.98	1.70	0.28	9.5	0.08	Clear, NO ODORS
1017	23.0	7.74	1423	0.88	0.98	0.25	10.5	0.08	
1021	23.2	7.68	1430	0.79	0.77	0.25	11.5	0.10	
1025	23.4	7.75	1433	0.77	0.70	0.25	12.5	0.10	
									Lowered flow for VOCs
									0,4,6,8

Sample ID: MW-01-O Sample Time, 1027 Duplicate (ID = N/A, Time N/A) Analyses Requested: Level II – Metals, Inorgs, Radios, BTEX, TPH-D

pH and TEMP CALIBRATION RECORD

Florence Copper Project

Instrument: BC's YSI556
SN: 15A102406
Probe SN: 60036

APP Sampling Event
Month: March
Year: 2018

Calibration Procedures:

-pH calibration/measurement should be performed in accordance with protocols set forth by ***Standard Methods for the Examination of Water and Wastewater – 4500 H pH.*** Gentle agitation or stirring of sample should maintained during pH calibration and sample analysis.

-Temperature measurement should be performed in accordance with protocols set forth by ***Standard Methods for the Examination of Water and Wastewater – 2550 Temperature*** using an NIST traceable thermometer.

Calibration Standards Used:

Standard	Manufacturer	Lot#	Received	Expiration
4.00	Env. Supply	7GH056	2/20/18	Aug 19
7.00	↓	7GK703	3/5/18	Nov 19
10.00	↓	7GF884	2/22/18	Jun 19
7.00 Chk	↓	7GL695	3/5/18	Dec 19

pH 4,10 new 3/8/18 w/ same Lot # pH 7 new 3/22/18 same Lot #

Calibration Record

Date	Time	Sampler	pH 4.00		pH 7.00		pH 10.00		pH 7.00Chk		Temp Chk*	Notes**
			T (°C)	Cal.	T (°C)	Cal.	T (°C)	Cal.	T (°C)	Cal.	T (°C)	
3/5/18	1225	Orcutt	—	—	—	—	—	—	19.5	7.01		
3/6/18	0830	"	17.5	4.01	15.1	6.98	17.0	10.02	15.5	7.02		
3/6/18	1310	"	—	—	—	—	—	—	24.6	6.98		
3/7/18	1145	"	—	—	—	—	—	—	23.8	6.98		
3/8/18	0755	"	16.3	4.00	13.9	7.00	16.4	10.02	13.9	7.02		
3/8/18	1235	"	20.0						23.5	6.98		
3/22/18	0940	"	~~20.0~~	4.00	20.3	7.01	20.6	10.02	20.2	7.02		

* Temperature check performed with second NIST thermometer.
** If meter does not provide slope, ensure that the calibration is confirmed with a recheck of pH 7.0 in the column "pH 7.00Chk".
***Perform 7-Check every 10 measurements or if Temperature increases by 15 °F.
**** All maintenance to instrument during the field event should be logged on the "Preventative Maintenance" log.

EC and DO CALIBRATION RECORD

Florence Copper Project

Instrument: BC's YSI556
SN: 15A102400
Probe SN: 60036

APP Sampling Event
Month: March
Year: 2018

Calibration Procedures:

-EC calibration/measurement should be performed in accordance with protocols set forth by ***Standard Methods for the Examination of Water and Wastewater – 2510 Conductivity.***

-Temperature measurement should be performed in accordance with protocols set forth by ***Standard Methods for the Examination of Water and Wastewater – 2550 Temperature*** using an NIST traceable thermometer.

-DO calibration/measurement should be performed as per manufacturer recommendations.

Calibration Standards Used:

Standard Conc.	Manufacturer	Lot#	Received	Expiration
1413	EnviSupply	8GA685	3/5/18	Jan 19
(check)	N/A	—	—	—

Calibration Record

Date	Time	Sampler	Specific Conductance						DO calibration performed?	Notes*
			EC 1413		EC 1413		EC 1413 Chk			*Changed DO Tip/Fluid
			T (°C)	Cal.	T (°C)	Cal.	T (°C)	Cal.	Yes/No	
3/6/18	0845	Orcutt			17.5	1414	—	—	Yes	100%SAT 767.7 mm/Hg
3/8/18	0815	"			13.11	1413	—	—	Yes	100%SAT. 765.8 "
3/22/18	0900	"								
"	0950	"			21.4	1413			Yes	100% Sat. 768.8 mm/Hg

* All maintenance to instrument during the field event should be logged on this form. All maintenance should also be logged on the "Preventative Maintenance" log.

TURBIDITY CALIBRATION RECORD

Florence Copper Project

Instrument: BC³ LaMotte 2020e
SN: 10969
Probe SN: N/A

APP Sampling Event
Month: March
Year: 2018

Calibration Procedures:

-Calibration/measurement should be performed in accordance with protocols set forth by ***USEPA Method 180.1***
using an NIST traceable thermometer.

Calibration Standards Used:

Standard	Manufacturer	Lot#	Received	Expiration
0 NTU	AMCO	C801968	3/5/18	6/18
1 NTU	↓	C6916108	↓	1/19
10 NTU	↓	C797837	↓	2/19
1 NTU Chk	↓	C6916108	↓	1/19

Calibration Record

Date	Time	Sampler	0 NTU	1 NTU	10 NTU	1 NTU Chk	Notes**
3/6/18	0845	Brent	0.00	1.01	10.02	0.98	
3/8/18	0805	"	0.00	1.01	10.00	0.99	
3/22/18	0947	X	0.00	0.98	9.99	0.98	

YSI 556 NEW JAN 28, 2015

1/28/15 ↓ 3/26/15 No Maint. Required

5/4/2015 M. Orcutt — DO not calibrating - Replaced DO Sensor membrane. Recalibration OK. (Florence).

5/7/2015 M. Orcutt — NIST Thermometer check. BC-1A Model 4146 Exp 11/8/2015 1°C. from YSI 556 Temp.

8/10/2015 M. Orcutt F.C. — pH not calibrating. Forced readings - Un calibrated and pH 7.0 Re Calib. check OK. MV +140 at pH 7.0

8/13/2015 M. Orcutt — Replaced pH/ORP Sensor +0.6 MV - good

Scale: 1 square = _____

2016

Aug 9, - Ernies M. Orcutt D.O. Fluid Replace and D.O. Tip replaced

Aug 26 Replaced DO Tip w/ new fluid. M. Orcutt Andrew prep'd

Sept. 6 M. Orcutt unit YSI pH failure. Replaced pH/ORP Sensor Equipco - repair.

Nov 10, 2016 M. Orcutt Florence Replaced YSI 556 pH/ORP Sensor

Nov 11, 2016 NIST Thermometer check @ Florence (W1585378) 18.4°C - YSI / 19.4° NIST (10C)

Scale: 1 square = _____

Rite in the Rain

OLD pH Sensor report

pH	mV	Reading	Temp
pH 7	·29	7.00	24.8 °C
4	+85.2	4.00	8524.4 ∝
10	-141.4	10.01	24.6

* pH 7 ok,
pH 4, 10 forced,
Changed Sensor (pH, ORP)

Scale: 1 square = _____

Scale: 1 square = _____

Brown and Caldwell
Michael Orcutt 6025674000
201 East Washington Street Suite 500
Phoenix AZ 85004

Account # 5490

USEPA Lab ID
Study # **QTA**
Study Type **External PT**

NPDES ID #
Open Date **10/30/2017**
Close Date **12/13/2017**

Part# **55026WV** Lot# **081117** **WP Conductance @ 25°C - DMRQA** **@ 25 C** Invoice# **166494** Units **umhos/cm**

NELAC #	Component	Method Code	Method Description	</>	Reported Value	AV or StudyMean	Assigned Value	Acceptance Limits Low	Acceptance Limits High	Performance Evaluation	Analysis Date
1610	Specific Conductance @ 25 C	200	2510B		768	744	744	670	818	ACCEPT.	12/12/2017

Samples were prepared and scored according to the principles outlined in the "The TNI Standard EL-V3-2009" and the current Fields of Proficiency Testing Tables, FoPTs.
All components are formulated and verified under Absolutes' NELAC scope (ANAB Accreditation ISO 17025, 17043 (Cert.# AP-1543) , Guide 34-35) as shown in blue font.

Calibration
Certificate No. 1750.01

Calibration complies with ISO/IEC 17025, ANSI/NCSL Z540-1, and 9001

Cert. No.: 4372-8485029

Traceable® Certificate of Calibration for Flip-Stick™ Thermometer

Instrument Identification:

Model: 4372 S/N: 170481521 Manufacturer: Control Company

Standards/Equipment:

Description	Serial Number	Due Date	NIST Traceable Reference
Temperature Calibration Bath TC-191	A42238		
Thermistor Module	A27129	12/01/17	1000401760
Temperature Probe	5202	12/19/17	B6B30058-1
Temperature Calibration Bath TC-218	A73332		
Thermistor Probe	5356	1/10/18	B7104024
Readout, Digital Thermometer	B5C344	3/12/18	B7314035

Certificate Information:

Technician: 104 Procedure: CAL-3 Cal Date: 4/24/17 Due Date: 4/24/19

Test Conditions: 23.7°C 47.0 %RH 1015 mBar

Calibration Data: (New Instrument)

Unit(s)	Nominal	As Found	In Tol	Nominal	As Left	In Tol	Min	Max	±U	TUR
°C		N.A.		0.000	-0.4	Y	-1.0	1.0	0.059	>4:1
°C		N.A.		90.000	89.9	Y	89.0	91.0	0.059	>4:1

This Instrument was calibrated using Instruments Traceable to National Institute of Standards and Technology.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. This certificate shall not be reproduced except in full, without written approval of Control Company.

Nominal=Standard's Reading; As Left=Instrument's Reading; In Tol=In Tolerance; Min/Max=Acceptance Range; ±U=Expanded Measurement Uncertainty; TUR=Test Uncertainty Ratio; Accuracy=±(Max-Min)/2; Min = As Left Nominal(Rounded) - Tolerance; Max = As Left Nominal(Rounded) + Tolerance; Date=MM/DD/YY

Nicol Rodriguez, Quality Manager

Aaron Judice, Technical Manager

Maintaining Accuracy:

In our opinion once calibrated your Flip-Stick™ Thermometer should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Flip-Stick™ Thermometers change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

Recalibration:

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 12554 Galveston RD Suite B230 Webster TX USA 77598
Phone 281 482-1714 Fax 281 482-9448 service@control3.com www.control3.com

Control Company is an ISO 17025:2005 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.
Control Company is ISO 9001:2008 Quality Certified by (DNV) Det Norske Veritas, Certificate No. CERT-01805-2006-AQ-HOU-RvA.
International Laboratory Accreditation Cooperation (ILAC) - Multilateral Recognition Arrangement (MRA).

BROWN AND CALDWELL

Acknowledgement Form

Name of Project/Site: Florence Copper	**Project No:** 152044
Project/Site Location: Florence, AZ	**Permit Type (APP, AZPDES):** APP
Employee Completing Form: (Print and Sign):	**Date:** 2/2/18

Employee Acknowledgement:

The following signatures indicate that these personnel have read and/or been briefed on the documents indicated and understand the work to be performed:

- ☑ pH by SM 4500 H-B
- ☑ temperature by SM 2550B
- ☑ specific conductance by SM 2510 B
- ☑ dissolved oxygen by SM 4500 O-G
- ☑ turbidity by EPA 180.1
- ☑ Manufacturer Info for Instrument YSI-556
- ☑ Manufacturer Info for Instrument Lamott 220 WE

Print	Sign
Michael Grant	

Comments

TURNER LABORATORIES INC.
2445 N. Coyote Drive, Suite 104
Tucson, Arizona 85745
(520) 882-5880
Fax: (520) 882-9788
www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # _____ DATE 3/5/2018 PAGE 1 OF 1

PROJECT NAME Florence Copper # _____

CONTACT NAME : Barb Sylvester

COMPANY NAME : Brown and Caldwell

ADDRESS : 2 N Central Ave, Suite 1600

CITY Phoenix STATE AZ ZIP CODE 85004

PHONE 602-567-3894 FAX

SAMPLER'S SIGNATURE

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS (*)	Diss Metals - list (Field Filtered)	Total Uranium (not Filtered)	Inorganics - list	Cyanide (free)	Organics - list	G.Alpha, Beta, (RadSafety sub)	Uranium activity if G. Alpha >12	Ra226, 228, Ra-Tot (RadsSafety)	Radon 222 (RadSafety sub)	TPH-D (TestAmerica Sub)
MS4-LBF	3/5/18	1300		GW	12	X	X	X	X	X	X	X	X	X	X
TB	"	—		GW											
				GW											
				GW											
				GW											
				GW											
				GW											
				GW											
				GW											
				GW											
				GW											

1. RELINQUISHED BY:
Signature
Printed Name Michael Quartt
Firm Brown + Caldwell
Date/Time 3/5/18 @ 1445

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS:
X Standard (approx.10 days)*
___Next day ___2 Day ___5 Day*
___Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
X I. Routine Report
___ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
___ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account X Y ___ N
P.O. # _____
Bill to: Florence Copper

SAMPLE RECEIPT:
Total Containers _____
Temperature _____
☑ Wet Ice ☐ Blue Ice

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature
Printed Name TURNER LABORATORIES, INC
Firm
Date/Time

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis: ☐ Yes ☐ No	Custody Seals ☐	Preservation Confirmation ☐
ADEQ Forms: ☐ Yes ☐ No	Container Intact ☐	Appropriate Head Space ☐
Mail ADEQ Forms: ☐ Yes ☐ No	COC/Labels Agree ☐	Received Within Hold Time ☐

(*) 3 bottles to RadSafety by SC 3/5/18
SEE Analytical List for COC

TURNER LABORATORIES INC
2445 N. Coyote Drive, Suite 104
Tucson, Arizona 85745
(520) 882-5880
Fax: (520) 882-9788
www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # _____ DATE 3/6/2018 PAGE 1 OF 1

PROJECT NAME Florence Copper # _____

CONTACT NAME : Barb Sylvester

COMPANY NAME : Brown and Caldwell

ADDRESS : 2 N Central Ave, Suite 1600

CITY Phoenix STATE AZ ZIP CODE 85004

PHONE 602-567-3894 FAX

SAMPLER'S SIGNATURE

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS (#)	Diss Metals - list (Field Filtered)	Total Uranium (not Filtered)	Inorganics - list	Cyanide (free)	Organics - list	G.Alpha, Beta, (RadSafety sub)	Uranium activity if G. Alpha >12	Ra226, 228, Ra-Tot (RadsSafety)	Radon 222 (RadSafety sub)	TPH-D (TestAmerica Sub)
MS4-0	3/6/18	0918		GW	12	X	X	X	X	X	X	X	X	X	X
MS8-0	3/6/18	11:17		GW	12	X	X	X	X	X	X	X	X	X	X
MS7-0	3/6/18	13:45		GW	12	X	X	X	X	X	X	X	X	X	X
TB	3/6/18	-		GW	1					X					
				GW											
				GW											
				GW											
				GW											
				GW											
				GW											
				GW											

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

1. RELINQUISHED BY:
Signature
Printed Name: Michael Orcutt
Firm: Brown + Caldwell
Date/Time: 3/6/18 @ 1500

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS:
X Standard (approx.10 days)*
___Next day ___2 Day ___5 Day*
___ Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
X I. Routine Report
___ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
___ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account X Y ___ N
P.O. # _____
Bill to: Florence Copper

SAMPLE RECEIPT:
Total Containers _____
Temperature _____
☑ Wet Ice ☐ Blue Ice

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature
Printed Name: TURNER LABORATORIES, INC.
Firm
Date/Time

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis:	☐ Yes ☐ No	Custody Seals	☐	Preservation Confirmation	☐
ADEQ Forms:	☐ Yes ☐ No	Container Intact	☐	Appropriate Head Space	☐
Mail ADEQ Forms:	☐ Yes ☐ No	COC/Labels Agree	☐	Received Within Hold Time	☐

(#) 3 Bottles for Rad Safety by BC
See Analytical Ltr w/ COC

TURNER LABORATORIES INC.
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Tucson, Arizona 85745
(520) 882-5880
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www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # _____ DATE 3/7/2018 PAGE 1 OF 1

PROJECT NAME Florence Copper # _____

CONTACT NAME: Barb Sylvester

COMPANY NAME: Brown and Caldwell

ADDRESS: 2 N Central Ave, Suite 1600

CITY Phoenix STATE AZ ZIP CODE 85004

PHONE 602-567-3894 FAX

SAMPLER'S SIGNATURE

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS (#)	Diss Metals - list (Field Filtered)	Total Uranium (not Filtered)	Inorganics - list	Cyanide (free)	Organics - list	G.Alpha, Beta, (RadSafety sub)	Uranium activity if G. Alpha >12	Ra226, 228, Ra-Tot (RadsSafety)	Radon 222 (RadSafety sub)	TPH-D (TestAmerica Sub)
MS5-UBF	3/7/18	0856		GW	12	X	X	X	X	X	X	X	X	X	X
MS6-LBF	3/7/18	10:00		GW	12	X	X	X	X	X	X	X	X	X	X
MS9-O	3/7/18	1218		GW	12	X	X	X	X	X	X	X	X	X	X
MS2-UBF	3/7/18	1412		GW	12	X	X	X	X	X	X	X	X	X	X
TB	3/7/18	—		GW	2					X					
				GW											
				GW											
				GW											
				GW											
				GW											
				GW											

1. RELINQUISHED BY:
Signature
Michael Orcutt
Printed Name
Brown & Caldwell
Firm
3/7/2018 @1520
Date/Time

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS:
X Standard (approx.10 days)*
___Next day ___2 Day ___5 Day*
___ Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
X I. Routine Report
___ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
___ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account X Y ___ N
P.O. # _____
Bill to: Florence Copper

SAMPLE RECEIPT:
Total Containers _____
Temperature _____
☑ Wet Ice ☐ Blue Ice

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature
Printed Name
TURNER LABORATORIES, INC.
Firm
Date/Time

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis:	☐ Yes ☐ No	Custody Seals	☐	Preservation Confirmation	☐
ADEQ Forms:	☐ Yes ☐ No	Container Intact	☐	Appropriate Head Space	☐
Mail ADEQ Forms:	☐ Yes ☐ No	COC/Labels Agree	☐	Received Within Hold Time	☐

(#) 3 Bottles to Rad Safety by BC
See Analytical list w/ COC

TURNER LABORATORIES INC.
2445 N. Coyote Drive, Suite 104
Tucson, Arizona 85745
(520) 882-5880
Fax: (520) 882-9788
www.turnerlabs.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # _____ DATE 3-8-2018 PAGE 1 OF 1

PROJECT NAME Florence Copper # _____

CONTACT NAME : Barb Sylvester

COMPANY NAME : Brown and Caldwell

ADDRESS : 2 N Central Ave, Suite 1600

CITY Phoenix STATE AZ ZIP CODE 85004

PHONE 602-567-3894 FAX

SAMPLER'S SIGNATURE

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS (#)	Diss Metals - list (Field Filtered)	Total Uranium (not Filtered)	Inorganics - list	Cyanide (free)	Organics - list	G.Alpha, Beta, (RadSafety sub)	Uranium activity if G. Alpha >12	Ra226, 228, Ra-Tot (RadsSafety)	Radon 222 (RadSafety sub)	TPH-D (TestAmerica Sub)
MW-60-0	3/8/18	0845		GW	12	X	X	X	X	X	X	X	X	X	X
MW-01-0		1028		GW	12	X	X	X	X	X	X	X	X	X	X
MW-61-LBF		1310		GW	12	X	X	X	X	X	X	X	X	X	X
MW-61-LBF		1430		GW	12	X	X	X	X	X	X	X	X	X	X
TB		—		GW	2					X					
				GW											
				GW											
				GW											
				GW											
				GW											
				GW											

1. RELINQUISHED BY: Signature Michael Orcutt Printed Name Brown + Caldwell Firm 3-8-2018 @ 1530 Date/Time

2. RECEIVED BY: Signature _____ Printed Name _____ Firm _____ Date/Time

TURNAROUND REQUIREMENTS:
X Standard (approx.10 days)*
___Next day ___2 Day ___5 Day*
___ Email Preliminary Results To: _____
* Working Days

REPORT REQUIREMENTS:
X I. Routine Report
___ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
___ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account X Y ___ N
P.O. # _____
Bill to: Florence Copper

SAMPLE RECEIPT:
Total Containers _____
Temperature _____
☑ Wet Ice ☐ Blue Ice

3. RELINQUISHED BY: Signature _____ Printed Name _____ Firm _____ Date/Time

4. RECEIVED BY: Signature _____ Printed Name TURNER LABORATORIES, INC. Firm _____ Date/Time

*LEGEND
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
SG = SLUDGE
SL = SOIL
ST = STORMWATER
WW = WASTEWATER

SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis:	☐ Yes ☐ No	Custody Seals	☐	Preservation Confirmation	☐
ADEQ Forms:	☐ Yes ☐ No	Container Intact	☐	Appropriate Head Space	☐
Mail ADEQ Forms:	☐ Yes ☐ No	COC/Labels Agree	☐	Received Within Hold Time	☐

@ 3 Bottles to Rad Safety by BC
See Analytical list w/ COC.

TURNER LABORATORIES INC.
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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

TURNER WORK ORDER # _____ DATE 3/22/2018 PAGE 1 OF 1

PROJECT NAME Florence Copper # _____

CONTACT NAME : Barb Sylvester

COMPANY NAME : Brown and Caldwell

ADDRESS : 2 N Central Ave, Suite 1600

CITY Phoenix STATE AZ ZIP CODE 85004

PHONE 602-567-3894 FAX

SAMPLER'S SIGNATURE

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX*	NUMBER OF CONTAINERS (*)	Diss Metals - list (Field Filtered)	Total Uranium (not Filtered)	Inorganics - list	Cyanide (free)	Organics - list	G.Alpha, Beta, (RadSafety sub)	Uranium activity if G. Alpha >12	Ra226, 228, Ra-Tot (RadsSafety)	Radon 222 (RadSafety sub)	TPH-D (TestAmerica Sub)
MW-01-0	3/22/18	1027		GW	12	X	X	X	X	X	X	X	X	X	X
MW-01-LBF		1150		GW	12	X	X	X	X	X	X	X	X	X	X
MG3.0		1210		GW	12	X	X	X	X	X	X	X	X	X	X
TB		—		GW	2					X					
				GW											
				GW											
				GW											
				GW											
				GW											
				GW											
				GW											

CIRCLE ANALYSIS REQUESTED AND/OR CHECK THE APPROPRIATE BOX

1. RELINQUISHED BY:
Signature: Michael Ort
Printed Name: Brown and Caldwell
Firm:
Date/Time: 3/22/18 1400

2. RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS:
X Standard (approx.10 days)*
___Next day ___2 Day ___5 Day*
___ Email Preliminary Results To:
* Working Days

REPORT REQUIREMENTS:
X I. Routine Report
___ II. Report (includes DUP,MS,MSD, as required, may be charged as samples)
___ III. Date Validation Report (Includes All Raw Data)
Add 10% to invoice

INVOICE INFORMATION:
Account X Y ___ N
P.O. # _____
Bill to: Florence Copper

SAMPLE RECEIPT:
Total Containers _____
Temperature _____
☑ Wet Ice ☐ Blue Ice

3. RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

4. RECEIVED BY:
Signature
Printed Name
TURNER LABORATORIES, INC.
Firm
Date/Time

***LEGEND**
DW = DRINKING WATER
GW = GROUNDWATER
SD = SOLID
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SPECIAL INSTRUCTIONS/COMMENTS:

Compliance Analysis:	☐ Yes ☐ No	Custody Seals	☐	Preservation Confirmation	☐
ADEQ Forms:	☐ Yes ☐ No	Container Intact	☐	Appropriate Head Space	☐
Mail ADEQ Forms:	☐ Yes ☐ No	COC/Labels Agree	☐	Received Within Hold Time	☐

(*) 3 bottles to Rad Safety by BC
Diss Metals Filtered.
SEE LIST in COC